

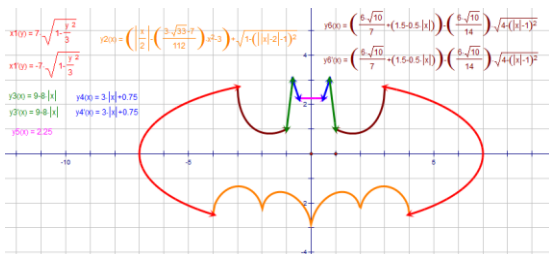
3.21-3.25 Unit Outline

Name _____ Date _____ Period _____

Learning Target	Assessment	M.L. 4	M.L. 3	M.L. 2	M.L. 1
1. I can perform arithmetic operations on complex numbers.	3.21 WS 3.21-3.23 Quiz 3.21-3.25 Review 3.21-3.25 Test				
2. I can convert complex numbers from standard form ($a + bi$) to trig. form and from trig. form to standard form.	3.22 WS 3.21-3.23 Quiz 3.21-3.25 Review 3.21-3.25 Test				
3. I can find the product and quotient of complex numbers in trig. form.	3.22 WS 3.21-3.23 Quiz 3.21-3.25 Review 3.21-3.25 Test				
4. I can use DeMoivre's Theorem to find the power of a complex number.	3.23 WS 3.21-3.23 Quiz 3.21-3.25 Review 3.21-3.25 Test				
5. I can find roots of a complex number.	3.23 WS 3.21-3.23 Quiz 3.21-3.25 Review 3.21-3.25 Test				
6. I can convert from polar coordinates to rectangular and rectangular to polar.	3.24 WS 3.24-3.25 Quiz 3.21-3.25 Review 3.21-3.25 Test				
7. I can translate equations from polar form to rectangular form and from rectangular to polar.	3.24 WS 3.24-3.25 Quiz 3.21-3.25 Review 3.21-3.25 Test				
8. I can eliminate the parameter of a parametric equation.	3.25 WS 3.24-3.25 Quiz 3.21-3.25 Review 3.21-3.25 Test				
9. I can graph parametric and polar equations.	3.24-3.25 WS 3.24-3.25 Quiz 3.21-3.25 Review 3.21-3.25 Test				

Mastery Level 4 = I've got this - I can teach this to others. **Mastery Level 3** = I understand - I can do this by myself.

Mastery Level 2 = I mostly get it - I can do this with help. **Mastery Level 1** = I don't understand - I cannot do this yet.



Product and Quotient of Complex Numbers

Let $z_1 = r_1 (\cos \theta_1 + i \sin \theta_1)$ and $z_2 = r_2 (\cos \theta_2 + i \sin \theta_2)$.

Then:

$$1. \quad z_1 \cdot z_2 = r_1 r_2 [\cos(\theta_1 + \theta_2) + i \sin(\theta_1 + \theta_2)]$$

$$2. \quad \frac{z_1}{z_2} = \frac{r_1}{r_2} [\cos(\theta_1 - \theta_2) + i \sin(\theta_1 - \theta_2)], \quad r_2 \neq 0.$$

